NAVAL WAR COLLEGE Newport, R.I.

PROSPECTS FOR A NAVAL SERVICE OPERATIONAL CONCEPT

by

R. G. SCHWASS LCDR, USN

A paper submitted to the Faculty of the Naval War College in partial satisfaction of the requirements of the Department of Joint Military Operations.

The contents of this paper reflect my own personal views and are not necessarily endorsed by the Naval War College or the Department of the Navy.

Signature:

5 February 1999

DISTRIBUTION STATEMENT A

Approved for Public Release Distribution Unlimited

DTIC QUALITY INSPECTED 4

19990520 060

Security Classification This Page REPORT DOCUMENTATION PAGE			
1. Report Security Classification: UNCLASSIFIED			
2. Security Classification Authority:			
3. Declassification/Downgrading Schedule:			
4. Distribution/Availability of Report: DISTRIBUTION STATEMENT A: APPROVED FOR PUBLIC RELEASE; DISTRIBUTION IS UNLIMITED.			
5. Name of Performing Organization: JOINT MILITARY OPERATIONS DEPARTMENT			
6. Office Symbol:	С	7. Address: NAVAL WAR CO 686 CUSHING NEWPORT, RI	ROAD
8. Title (Include Security Classification): Prospects for a Naval Service Operational Concept (unclassified)			
9. Personal Authors: Roderick G. Schwass, LCDR, USN			
10.Type of Report:	FINAL	11. Date of Report: 05 F	ebruary, 1999
12.Page Count: 🖀 18			
13. Supplementary Notation: A paper submitted to the Faculty of the NWC in partial satisfaction of the requirements of the JMO Department. The contents of this paper reflect my own personal views and are not necessarily endorsed by the NWC or the Department of the Navy.			
14. Ten key words that relate to your paper: Comparison of Navy, Marine Corps and Joint operational concepts.			
While complementary in nature, Forwardfrom the Sea, The Navy Operational Concept and Operational Maneuver from the Sea are different enough to warrant separate concept statements vice being melded into a single Naval Service Operational ConceptAdditionally, both of these concepts are complementary with and supportive of the tenets of Joint Vision 2010. However, the Navy and Marine Corps concepts do exhibit vulnerabilities in that they are highly leveraged by anticipated advances in weapons and information technologies. Additionally, they fail to provide a proper emphasis on the development of force employment concepts for military operations other than war.			
16.Distribution / Availability of Abstract:	Unclassified X	Same As Rpt	DTIC Users
17.Abstract Security Classification: UNCLASSIFIED			
18. Name of Responsible Individual: CHAIRMAN, JOINT MILITARY OPERATIONS DEPARTMENT			
19.Telephone: 841-6461		20.Office Symbol: C	

UNCLASSIFIED

ABSTRACT OF

PROSPECTS FOR A NAVAL SERVICE OPERATIONAL CONCEPT

Upon the end of the Cold War, the military services were abruptly confronted with the challenge of defining and justifying force levels and force structure in the face of increasing demands for a peace dividend. This challenge was made more difficult by the lack of a monolithic or well-defined threat around which operational requirements and concepts could be developed. The resultant lack of focus drove the services to reexamine their missions and guiding principles in search of an operational vision for the 21st century.

The Navy-Marine Corps team has met this challenge by attempting to identify and define broad operational concepts that are leveraged on traditional service strengths and innovative technological improvements. These concepts are set forth in Forward...from the Sea, Forward...from the Sea, The Navy Operational Concept, and Operational Maneuver from the Sea (OMFTS). Each of these documents strives to lay out an operational vision for the Navy and Marine Corps well into the 21st century.

A comparison of the Navy and Marine Corps visions will show that they are complementary to each other and supportive of the tenets of Joint Vision 2010 (JV 2010). This examination will also show that the two visions are different enough that they should not be combined into a single Naval Service Operational Concept. It will also reveal certain vulnerabilities in the conceptual framework; specifically 1) an overly optimistic reliance on the development of new weapon and information technologies, and 2) a lack of focus on the conduct of military operations other than war.

INTRODUCTION

The U.S. Navy and Marine Corps leadership is struggling with the challenge of identifying the most likely operational environment in the 21st century and subsequently defining operational concepts appropriate for that environment. The U.S. military constants of the Cold War (a monolithic threat, well-defined missions and robust forces) have disappeared and have been replaced with ambiguous threats, a reduction in force structure and an increase in the number and variety of missions. This ambiguity is welcome in that it forces a reexamination of the best way in which to employ the services to protect U.S. security interests worldwide, which is always a useful process. However, the increase in the number of variables confronting planners in this environment makes it difficult to lay out a clear framework for operational employment.

Addressing this problem, the Navy and Marine Corps have been working to define operational concepts that will carry them through this period of uncertainty and into the 21st century. Forward...from the Sea, Forward...from the Sea, The Navy Operational Concept, and Operational Maneuver from the Sea represent current progress towards clearly defining naval service operational concepts. This concept development process is guided by the tenets of Joint Vision 2010, but also relies on traditional strengths inherent in the sea services.

This paper will examine the complementary nature of the Navy and Marine Corps visions and will demonstrate that they are different enough to warrant separate concept statements vice a single naval service concept statement. It will also examine the degree to which these concept statements are compatible with and supportive of <u>Joint Vision</u>

2010. However, this examination will also demonstrate certain vulnerabilities in the

conceptual framework of these visions. Specifically, it will address the overly optimistic assessment of future information and weapon technology enhancements and the degree to which they are leveraged to support these concepts. And secondly, it will demonstrate that there is a lack of focus on force employment concepts for military operations other than war.

COMPLEMENTARY CONCEPTS

With the publication of Forward...from the Sea, Secretary of the Navy John Dalton, Chief of Naval Operations Admiral Boorda and Commandant of the Marine Corps General Mundy expanded on the strategic concepts laid out in the white paper ...From the Sea. A combined vision statement for the Navy and Marine Corps, Forward...from the Sea emphasizes the "...need for the Navy to support the national strategic objectives through our enduring contributions in strategic deterrence, sea control and maritime supremacy, and strategic sealift." In addition to these traditional naval missions, it places an increased emphasis on forward presence and power projection in the littorals. Forward deployed units and naval and marine expeditionary forces are identified as potent tools to respond, either independently or as an integral part of a joint force, to the spectrum of operations from peacetime forward presence to crisis response to major regional conflict.

Chief of Naval Operations, Admiral Johnson further refined this shift in focus from blue-water operations to expeditionary operations. In <u>Forward...from the Sea, The Navy Operational Concept</u>, he specifies that "naval operations include delivering

¹ U.S. Department of the Navy, <u>Forward...from the Sea</u>. (Washington, D.C.: September 1994), 1.

precision naval fire, conducting naval operational maneuver, providing protection for joint and coalition forces ashore, keeping the seaborne logistics pipeline flowing, and remaining on scene after the joint campaign to enforce sanctions and maintain regional stability."² Whereas <u>Forward...from the Sea</u> identifies the importance of the strategic concept of expeditionary warfare, Admiral Johnson provides the vision of the <u>ways and means</u> with which the concept should be implemented, now and in the future. He discusses Navy and Marine Corps roles and capabilities in support of the National Military Strategy: Peacetime Engagement, Deterrence and Conflict Prevention, and Fight and Win. And he provides a roadmap for further technological and operational concept development in support of this strategy.

The Marine Corps vision as expressed by Commandant of the Marine Corps,

General Krulak, is contained in Operational Maneuver from the Sea. This document
represents the ways and means of the Marine Corps' mission as set forth in Forward
...from the Sea. It focuses primarily on creating the ability for expeditionary forces to
inflict damaging blows to an enemy's center of gravity through the use of sea-based
logistics, sea-based fire support and high tempo ship-to-objective operations. General
Krulak stresses that Operational Maneuver from the Sea is not solely suited to traditional
amphibious operations, but that it is an adaptation of traditional maneuver warfare to
"...a wide variety of situations, ranging from humanitarian relief to a high-stakes struggle
against a rising superpower."

² U.S. Department of the Navy, <u>Forward...from the Sea, The Navy Operational Concept</u>. (Washington, D.C.: March 1997), 7.

³ U.S. Department of the Navy, <u>Operational Maneuver from the Sea</u>. (Washington, D.C.: January 1996), 12.

The Navy and Marine Corps concept statements are certainly complementary to each other. They both highlight the importance of maintaining forward deployed naval forces that are combat-ready and sustainable. They both seek to seek to improve service capabilities in support of the National Military Strategy and Joint Vision 2010.

Specifically, they provide the vision of a power projection force that is capable of achieving operational and strategic level objectives throughout the employment spectrum from forward presence and deterrence to crisis response and major conflicts.

However, the fact that these concept statements are in many ways complementary does not warrant melding them into a single Naval Service operational concept. The focus of Operational Maneuver from the Sea is amphibious warfare. Certainly, naval forces will play a significant role in the development and execution of this concept. But the principles and vision set forth in Forward...from the Sea and Forward...from the Sea, The Navy Operational Concept are much broader in nature. Supporting the insertion and sustainment of Marines is only one of many naval missions. Providing maritime supremacy, establishing battlespace dominance, maintaining secure sea lines of communication, providing joint operational fires, strategic strikes, and enforcing sanctions are all examples of naval missions that are of operational significance outside the realm of amphibious warfare. Of course, marines benefit from these missions when conducting amphibious operations. However, the navy vision includes exercising these capabilities across a spectrum of conflict from deterrence to major conflicts in support of joint and multi-national forces that may or may not include a Marine element or an amphibious operation.

Operational Maneuver from the Sea is best suited as a separate concept statement that defines the Marine Corps role within the broader naval concepts of precision fires and naval operational maneuver. Marine forces represent one type of precision fire that may be employed by naval forces to project power in the littorals. But precision fires also include aircraft and missile strikes, operational fires in support of major joint or multi-national operations, and theatre ballistic missile defense; all of which may be totally unrelated to Marine Corps amphibious operations. Similarly, ship-to-objective maneuver of marine forces represents one type of naval operational maneuver. However, the traditional naval maneuver missions such as defeating enemy sea denial efforts, achieving maritime superiority and securing the sea lines of communication, will always have an enduring operational and strategic impact with or without the presence of marine forces.

Certainly an argument can be made for integrating the tenets of the Marine Corps Statement into Forward...from the Sea, perhaps as a subsection of precision fires or naval operational maneuver. However, the existence of a separate Marine Corps statement will aid Marine Corps leadership in further defining their role within the framework of Forward...from the Sea. Additionally, it provides recognition of the unique contributions of marine combat capability to naval and joint forces, without detracting from the broader vision contained in Forward...from the Sea.

SUPPORTING THE JOINT VISION WITH NAVAL FORCES

As Chairman of the Joint Chiefs of Staff, General Shalikashvili also sought to capture the vision of what the operational environment would be in the 21st century. His

vision of future force employment is contained in <u>Joint Vision 2010</u>. This document sets forth the concepts of dominant maneuver, precision engagement, full dimensional protection, and focused logistics that are now guiding service concept development and technological and doctrinal innovation. <u>Forward...from the Sea</u>, <u>The Navy Operational Concept</u> and <u>Operational Maneuver from the Sea</u> are both complementary with these tenets of <u>Joint Vision 2010</u>.

Dominant maneuver is defined as "the multidimensional application of information, engagement, and mobility capabilities to position and employ widely dispersed joint air, land, sea, and space forces to accomplish the assigned operational tasks."4 This concept represents a vision of joint forces that are capable of synchronizing their operations over great distances for a sustained period. Such forces will operate at a high-tempo, be more agile and will present a smaller, more deceptive target to the enemy. Additionally, such forces will be tailored to specific operational or strategic objectives in order to strike directly at enemy centers of gravity. The concepts of naval operational maneuver and ship-to-objective movement are a significant component of dominant maneuver. Naval operational maneuver, in the form of traditional naval strengths of mobility and freedom of action at sea, means that naval forces can respond to a crisis from the continental United States or forward operating areas on short notice. These forces arrive on scene, ready for employment, and with the ability to strike immediately at enemy centers of gravity through the use of air strikes, missile strikes or marine combat power. As well as being deployed from widely dispersed parts of the globe, these

⁴ Chairman of the Joint Chiefs of Staff, <u>Joint Vision 2010</u>. (Washington, D.C.: Undated), 20.

forces can continue to fulfill their mission while remaining dispersed, and thus less targetable, throughout the operating area.⁵

Precision engagement is defined as "...a system of systems that enables our forces to locate the objective or target, provide responsive command and control, generate the desired effect, assess our level of success, and retain the flexibility to reengage with precision when required." It is the ability of joint forces to leverage informational and technological advances to provide highly accurate operational and tactical fires from extended ranges and with minimal collateral damage. The concept of naval precision engagement is directly supportive of this concept. The navy vision includes the development of enhanced informational capabilities such as Cooperative Engagement Capability and Network-Centric Warfare that will significantly enhance its targeting and command and control capabilities. The naval operational concept is also leveraged on the development of longer-range, more accurate weapons such as Extended Range Guided Munitions (ERGM), the Land Attack Standard Missile (LASM), the Navy Tactical Missile System(NTACMS), the Vertical Gun for Advanced Ships (VGAS), improved variants of TOMAHAWK, and improved Unmanned Aerial Vehicle technology. As pointed out previously, marine combat power is one form of naval precision fire. Improvements in marine combat power will include the introduction of the Advanced Amphibious Assault Vehicle and the V-22 Osprey Tilt-Rotor Aircraft. Utilizing these two technologies, in conjunction with the ship-to-objective concept, the Marine forces can significantly increase the range and tempo of their operations. All of

⁵ Roger W. Barnett, <u>Grasping 2010 with Naval Forces</u>. (Newport, R.I.: U.S. Naval War College, 1997), 9-13.

⁶ Chairman of the Joint Chiefs of Staff, Joint Vision 2010. (Washington, D.C.: Undated), 21.

these new technologies are leveraged by the Navy and Marine Corps concepts to provide improved command and control, targeting and battle damage assessment in support of joint operations as envisioned in <u>Joint Vision 2010</u>.⁷

Full Dimensional Protection is described as the process of controlling the battlespace "...to ensure our forces can maintain freedom of action during deployment, maneuver and engagement, while providing multi-layered defenses for our forces and facilities at all levels." This concept rests upon the development of improved information and weapon technologies to deny our enemies opportunities to target our forces with information warfare, weapons of mass destruction or conventional weapons. Naval forces contribute to Full Dimensional Protection of joint forces by executing the traditional missions of maritime superiority, sea control, strategic sealift, and mine warfare.

Until recently, the naval concept of force protection was limited to ensuring the survival of its own assets (carriers, oilers, troop transports) and providing short range Naval Gunfire Support. The previously discussed concepts of naval operational maneuver and precision engagement demonstrate the Navy's broadened vision of providing force wide protection through the use of information warfare and advanced weapons technologies. Specifically, improved command and control systems will allow the naval forces to provide: 1) direct support to joint or multi-national ground forces through the use of Naval Surface Fire Support weapons (ERGM, LASM, NTACMS, VGAS, TOMAHAWK) and the ability to rapidly deploy marine combat power; 2) air superiority

⁷ Office of Naval Intelligence, <u>Challenges to Naval Expeditionary Warfare</u>. (Washington, D.C.: March 1997), 27-31.

through the use of naval aviation, Cooperative Engagement Capability and improved surface to air missile systems; and 3) protection against ballistic missiles and weapons of mass destruction with a Theatre Ballistic Missile Defense system. In addition to this capability for joint and multi-national force protection, longer stand-off ranges for improved weapons, stealth technologies and the ability to remain dispersed in the operating area provide further layers of protection for naval forces.⁹

The concept of Focused Logistics is described in <u>Joint Vision 2010</u> as "...the fusion of information, logistics, and transportation technologies to provide rapid crisis response, to track and shift assets even while enroute, and to deliver tailored logistics packages and sustainment directly at the strategic, operational, and tactical level of operations." The vision here is of a smaller, more maneuverable force, unencumbered by a heavy logistics tail, that is supported with the specific quality and quantity of material appropriate to its mission. The navy has traditionally supported this concept by providing escort and protection for strategic sealift and afloat prepositioning ships, cultivating host-nation support, and by "invariably arriving at the scene of action with filled fuel bunkers, magazines, and storerooms." The Marine Corps also embodies this concept in the form of flexible Marine Air Ground Task Forces that can be rapidly reconfigured for different contingencies. As well, the ship-to-objective philosophy envisions a very small logistics footprint for marines ashore. And, finally, naval and

⁸ Chairman of the Joint Chiefs of Staff, <u>Joint Vision 2010</u>. (Washington, D.C.: Undated), 22.

⁹ Office of Naval Intelligence, <u>Challenges to Naval Expeditionary Warfare</u>. (Washington, D.C.: March 1997), 27-31.

¹⁰ Chairman of the Joint Chiefs of Staff, Joint Vision 2010. (Washington, D.C.: Undated), 24.

¹¹ Roger W. Barnett, <u>Grasping 2010 with Naval Forces</u>. (Newport, R.I.: U.S. Naval War College, 1997), 26.

marine forces can establish and protect forward basing areas in support of resupply and reinforcement operations for joint and multi-national forces.

To summarize these points, we have demonstrated that the Navy and Marine Corps operational concepts, while complementary, warrant separate venues vice being combined into a single naval service operational concept. Indeed, we have shown that Operational Maneuver from the Sea is really a subset of the broader concepts of naval precision fires and naval operational maneuver. And, finally, it has been demonstrated that both the Navy and Marine Corps operational concepts, by emphasizing traditional service missions and leveraging new technologies, provide a vision of how naval forces will contribute to joint and multi-national operations as envisioned in Joint Vision 2010.

VULNERABILITIES

The foregoing discussion has dealt with the compatibility of operational concepts appropriate for naval forces involved in a conventional conflict such as Desert Storm. However, the emphasis placed on new technology may prove dangerous to the maintenance of a sound force structure. Additionally, these concept statements do not adequately cover organizational, doctrinal or training issues associated with the incorporation of new technology. Nor do they address the need for new operational concepts in support of military operations other than war.

The degree to which the Navy and Marine Corps operational concepts are leveraged by nascent and anticipated advances in information and weapons technologies should give us pause. Especially so when those advances are touted as mitigating factors for a reduced force structure. This is particularly true for the surface navy, which retired

ten percent of its surface combatants in 1997 alone. And though the pace of decommissioning has leveled out, the current planned rate of ship construction cannot maintain the current level of 128 surface combatants. That number is expected to be as low as 116 by 2000.¹²

Already, carrier battle groups and amphibious readiness groups (ARG) are deploying with fewer ships, and have done so for the past few years. Yet these battle groups and ARGs are fulfilling a wider variety of missions and responding to an increased number of crises than their larger Cold War counterparts. However, advocates claim that improved technologies, such as those resident in DD-21 and LPD-17 ships, will allow our deployed forces to keep their edge. ¹³ Certainly, building multi-mission ships with improved information links, command and control organization and advanced weaponry is necessary. But, when a battle group is tasked with simultaneous missions such as maritime interception operations, pre-position ship escort, strike contingencies, humanitarian contingencies, bi-lateral exercises, own and joint force protection, etc... how small can it become before it compromises some of its capability?

These technological advances are often associated with a perceived Revolution in Military Affairs (RMA). However, most of these new technologies represent incremental improvements in information and weapons systems without the organizational and doctrinal innovation requisite in a true RMA. This is particularly true for the Navy, which is far behind the Marine Corps, Army and Air force in defining and incorporating doctrine into routine operations. This is largely due to a naval culture bred on

¹² Tom Philpott, "Rising Technology, a Declining fleet," <u>Seapower</u>, January 1998, 9.

¹³ Office of Naval Intelligence, <u>Challenges to Naval Expeditionary Warfare</u>. (Washington, D.C.: March 1997), 27-31.

independent, self-contained, self-sustaining operations. A common example of a successful RMA is the development of the blitzkrieg around the relatively new tank technology pre-World War II. The French had the technology first, but their country was overrun in 1940 by the German Panzer divisions, which had coupled the new technology with organizational and doctrinal innovation. ¹⁴ Perhaps we are in danger of introducing new technologies that will eventually be used against us because we have not thoroughly developed the doctrine, organization or training necessary to implement them effectively.

Certainly, Admiral Johnson and General Krulak promote innovation in their concept statements. Ship-to-Objective Movement is certainly an innovation in amphibious operations. And Theatre Ballistic Missile Defense for a joint force will be a quantum leap in the definition of force protection. However, too much emphasis is placed on technology that is designed to win another Desert Storm against an adversary willing to meet us on the field of battle. This new technology does not replace the need for organizational, doctrinal and training innovation to address the difficult problems in military operations other than war (MOOTW), which are and will continue to be more prevalent than major regional conflicts. Enhanced firepower, networked information systems and stealthy UAVs are of little value in a Somalia scenario where the enemy is difficult to identify and relies on a word of mouth intelligence and information network. And Ship-to-Objective Movement does not overcome the hazards of urban warfare,

¹⁴ Thomas G. Mahnken, "Armored Warfare and the Interwar Revolution in Military Affairs," Lecture, U.S. Naval War College, Newport, R.I.: 1 October 1998.

where remote sensor and targeting systems are ineffective, and marines and soldiers will still have to fight their way from house to house.¹⁵

In environments such as Somalia, Rwanda, Sierra Leone and any number of other potential hot spots, the concepts of battlespace dominance and information superiority are misplaced. Conceivably, we already possess levels of firepower and an intelligence capability far superior to anything a potential third-world adversary could field against us. We must guard against the misconception that further improvements in our weapon and information capabilities will provide a panacea for force employment problems in MOOTW environments torn apart by ethnic, religious, tribal or extremist conflicts.

Longer standoff ranges, more complex information networks and precision munitions cannot be a substitute for a well-organized, forceful presence on the ground.

Certainly, enhancements in weapon and information technologies are vital to robust naval and marine forces. However, they cannot be counted upon to entirely redeem a force structure fallen victim to a post Cold-War peace dividend. Nor should they be regarded as constituting an RMA without significantly more progress in the realm of organizational and doctrinal innovation. And finally, we must not make the mistake of preparing for the war we would like to fight at the expense of preparing for the MOOTW missions we will certainly continue to execute.

¹⁵ Robert E. Podlesny, "MOUT: The Show Stopper," U.S. Naval Institute <u>Proceedings</u>, February 1998, 50-54.

CONCLUSION

The development of a naval service operational concept is an ongoing process.

The vision provided in <u>Forward...from the Sea</u> and <u>Forward...from the Sea</u>, <u>The Navy</u>

<u>Operational Concept</u> provides a good roadmap for further innovation efforts. And

<u>Operational Maneuver from the Sea</u> is certainly complementary with this vision and even goes a step further by expanding on the Marine Corps' contribution to precision fires and naval operational maneuver.

However, the current focus of these concept statements is on the "Fight and Win" leg of the National Military Strategy triad. And the naval operational vision of "Fight and Win" is massed firepower and information superiority. This is clearly commensurate with the tenets of <u>Joint Vision 2010</u> and is appropriate when preparing to fight the next Desert Storm. But this focus detracts from the development of innovations in naval force employment for MOOTW.

Additionally, the technological emphasis of these concepts exemplifies the American notion of a short, clean war, with few casualties and minimal collateral damage. Certainly these are admirable goals, but not at the expense of rejecting the reality that war and MOOTW are messy events that frequently do not lend themselves to quick solutions or the use of precision munitions from a safe standoff range.

We can prepare effectively for the next major conflict while still searching for innovative organizational and doctrinal solutions to the problems of MOOTW. And these solutions are unlikely to be found in the high-tech arena. But they will not be sought out energetically without first being given a greater degree of primacy within the naval service operational concept.

BIBLIOGRAPHY

- Barnett, Roger W. <u>Grasping 2010 with Naval Forces</u>. U.S. Naval War College, Newport, R.I.: 1997.
- Barnett, Roger W. Expeditionary Power Projection: An Operational Concept for the U.S. Navy. U.S. Naval War College, Newport, R.I.: 1996.
- Bowdish, Randall G. and Woodyard, Bruce "A Naval Concepts-Based Vision for Space." <u>U.S. Naval Institute Proceedings</u>, January 1999, 50-53.
- Brill, Arthur P. "Warriors for the 21st Century." Seapower, January 1998, 15-24.
- Carey, Merrick "Power Projection for the New World Disorder." <u>Seapower</u>, September 1998, 43-46.
- Carman, James "Innovation for the Interwar years." <u>U.S. Naval Institute</u> <u>Proceedings</u>, February 1998, 27-31.
- Chairman of the Joint Chiefs of Staff. <u>Joint Vision 2010</u>, Washington D.C.: undated.
- Dalton, John H. "Co-operation is Key and Quality Remains All Important." <u>Jane's Navy International</u>, October 1998, 37-41.
- Davis, Jeffrey P. "Ship-to-Objective Maneuver: Will This Dog Hunt?" <u>U.S. Naval Institute Proceedings</u>, August 1998, 31-34.
- Gamboa, John "The Cost of Revolution." <u>U.S. Naval Institute Proceedings</u>, December 1998, 58-61.
- Gourley, Scott R. "Expanding the Littoral Battlespace." <u>Seapower</u>, June 1998, 45-46.
- Hammes, T. X. "War Isn't a Rational Business." <u>U.S. Naval Institute</u> <u>Proceedings</u>, July 1998, 22-25.
- Hessman, James D. and Peterson, Gordon I. "The Tip of the Spear." <u>Seapower</u>, October 1998, 13-18.
- Hughes, Wayne P. "Naval Maneuver Warfare." <u>Naval War College Review</u>, Summer 1997, 25-47.
- Johnson, Jay L. "The Navy in 2010: A Joint Vision." <u>Joint Force Quarterly</u>, Winter 1996, 17-19.

- Lindsey, Scott "Deep Coalitions: Alternative Power Projection." <u>U.S. Naval</u> <u>Institute Proceedings</u>, January 1999, 72-74.
- Mahnken, Thomas G. "Armored Warfare and the Interwar Revolution in Military Affairs." Lecture, U.S. Naval War College, Newport, R.I.: 1 October 1998.
- Office of Naval Intelligence. <u>Challenges to Naval Expeditionary Warfare</u>, Washington, D.C.: March 1997.
- Peterson, Gordon I. "Anywhere, Anytime...For Decades to Come." <u>Seapower</u>, August 1998, 15-18.
- Philpott, Tom "Rising Technology, a Declining Fleet." <u>Seapower</u>, January 1998, 5-14.
- Pierce, Terry C. "Teaching Elephants to Swim." 26-29.
- Podlesny, Robert E. "MOUT: The Show Stopper." <u>U.S. Naval Institute</u> <u>Proceedings</u>, February 1998, 50-54.
- Reimer, Dennis J. "Dominant Maneuver and Precision Engagement." <u>Joint Force</u> <u>Quarterly</u>, Winter 1996, 13-16.
- Truver, Scott "Surface Revolution, DD 21 Redefines the Destroyer." <u>Jane's Navy International</u>, July 1998, 12-18.
- Turner, Stansfield "Missions of the U.S. Navy." <u>Naval War College Review</u>, Winter 1998, 87-103.
- Uhlig, Frank "The Constants of Naval Warfare." <u>Naval War College Review</u>, Spring 1997, 92-105.
- U.S. Navy Department. Forward...from the Sea, Washington D.C.: 1994.
- U.S. Navy Department. <u>Forward...from the Sea, The Navy Operational Concept</u>, Washington D.C.: March 1997.
- U.S. Navy Department. ...From the Sea, Preparing the Naval Service for the 21st Century, Washington D.C.: 1992.
- U.S. Navy Department. <u>Operational Maneuver from the Sea</u>, Washington D.C.: January 1996.
- West, F. J. "Ring of Fire or Ring of Smoke?" <u>U.S. Naval Institute Proceedings</u>, November 1998, 38-41.